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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/884,640	06/19/2001	Nicholas F. Borrelli	SP01-087	2658

22928 7590 03/26/2003

CORNING INCORPORATED
SP-TI-3-1
CORNING, NY 14831

EXAMINER

CURTIS, CRAIG

ART UNIT	PAPER NUMBER
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2872

DATE MAILED: 03/26/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.
09/884,640

Applicant(s)
BORRELLI et al.

Examiner
Craig Curtis

Art Unit
2872



-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on Jun 19, 2001
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-24 is/are pending in the application.
- 4a) Of the above, claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-24 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claims _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
*See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s). 4 6) ☐ Other:

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DETAILED ACTION

Claim Objections

1. Claims 1-24 are objected to because of the following informalities: Applicants are respectfully requested to replace the square-bracketed claim identifiers ([c1]...[c24]) by the following: "1." ... "24." (Text inside square brackets is interpreted by the printing department as text that is to be deleted.)
Appropriate correction is required.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

- (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.
2. Claims 1-24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Siroki (5,757,538) in view of Chou (5,772,905).

With regard to claims 1-15, Siroki discloses the invention as claimed--a method (implicitly met by structure teachings of Siroki) for fabricating an integrated optical isolator, comprising:

depositing a wire grid material (col. 2, ll. 45-67--col. 3, ll. 1-4) on a magneto-optical substrate (Faraday element 1);

said wire grid material comprising a metallic material (Id.)

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said wire grid material comprising a dielectric material sandwiched between two metallic materials (col. 1, 34-42)--EXCEPT FOR express teachings of the following:

depositing a resist film on the wire grid material;

wherein said method comprises heating said mold and said resist film to a temperature above the glass transition temperature of said thermoplastic polymer prior to bringing said mold in contact with said resist film; and

coating said magneto-optical substrate with an anti-reflective material prior to depositing the wire grid material on the substrate.

Chou, however, discloses depositing a resist film on a wire grid material (See Figs. 1A-1D), as well as heating a mold and said resist film to a temperature above the glass transition temperature of a thermoplastic polymer (PMMA) prior to bringing said mold into contact with said resist film (col. 2, ll. 19-45). It would have been obvious to one having ordinary skill in the art at the time the invention was made to have modified the inherent method teachings of Siroki to further include depositing a resist film on a wire grid material & heating a mold and a resist film to a temperature above the glass transition temperature of said thermoplastic polymer prior to bringing said mold into contact with said resist film, for at least the purpose of achieving an integrated optical isolator that would be, comparatively speaking, more robust (read: integrally secure) than an optical isolator fabricated without these additional steps. With regard to the teaching of coating said magneto-optical substrate with an anti-reflective material prior to depositing said wire grid on said substrate, it is noted that the application of anti-reflective coatings to substrates is notoriously old and well-known in the art of optics, and would have been obvious to one

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having ordinary skill in the art, for at least the purpose of mitigating reflection losses of light propagating through said integrated optical isolator.

With regard to claims 16-24, Siroki discloses the claimed invention as set forth above EXCEPT FOR an express teaching wherein said first and second surfaces of said magneto-optical substrate are coated with an anti-reflection material.

However, as noted above, the application of anti-reflective coatings to substrates is notoriously old and well-known in the art of optics, and would have been obvious to one having ordinary skill in the art, for at least the purpose of mitigating reflection losses of light propagating through said integrated optical isolator.

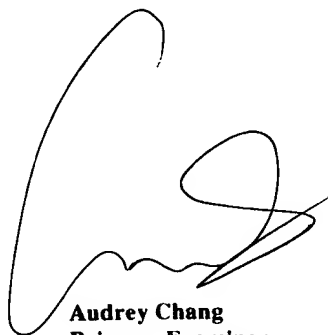
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Contact Information

3. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Craig Curtis, whose telephone number is (703) 305-0776.

The facsimile phone number for Art Unit 2872 is (703) 308-7721.

Any inquiry of a general nature regarding to status of this application should be directed to the Group receptionist, whose telephone number is (703) 308-0956.

A stylized, handwritten signature in black ink, consisting of a large, sweeping loop followed by a smaller, more intricate flourish.

**Audrey Chang
Primary Examiner
Technology Center 2800**

Craig H. Curtis
Craig H. Curtis
Group Art Unit 2872
20 March 2003